IN THE SPECIFICATION:

Please amend the specification as follows:

Page 1, after the title and before the heading "FIELD OF THE INVENTION",

please amend the application as follows:

SEISMIC P-WAVE VELOCITY DERIVED FROM
VIBRATOR CONTROL SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

This ~~is a continuation-in-part of~~ application claims priority to U.S. Serial No.

60/464,315 filed April 23, 2003, now abandoned, the disclosure of which is herein

incorporated by reference.

FIELD OF THE INVENTION

[0001]   This invention relates to seismic exploration, and more particularly to the

mapping of underground features for oil and gas exploration.

Page 4, first two paragraphs, paragraphs [0014] and [0015], lines 1-2 on page 4, please amend the specification as follows:

[0014]   FIG. 4 ~~illustrates an idealized relationship of V_p/V_s to Poisson's ratio~~ is a crossplot of calculated V_p versus 20 meter iso-depth uphole velocities.

[0015]   FIG. 5 ~~is a crossplot of calculated V_p versus 20 meter iso-depth uphole velocities~~ illustrates an idealized relationship of V_p/V_s to Poisson's ratio.

Page 7, last partial paragraph to page 8, first partial paragraph, paragraph [0044], from line 21 on page 7 to line 6 on page 8, please amend the specification as follows:

[0044]   The previous derivation shows that both K_g and D_g can be used to eliminate the dependence on density and Poisson's ratio to compute V_s. An idealized relationship of V_p/V_s to Poisson's ratio is shown in FIG. [[4]] 5. In general, Poisson's ratio for cohesionless soils ranges from 0.25 to 0.35 and for cohesive soils from 0.35 to 0.45. The corresponding V_p/V_s ratio will vary from 1.73 to 2.08 for cohesionless soils and from 2.08 to 3.32 for cohesive soils. The median of these ratios is 2.3. This value is used as a reasonable approximation of the V_p/V_s ratio for the near surface materials that will be sensed by the vibrator, as not all of these materials will be cohesive or cohesionless, but rather a combination of the two.

Page 9, first full paragraph, paragraph [0048], lines 1-4 on page 9, please amend the specification as follows:

[0048]   FIG. [[5]] $\underline{4}$ shows a crossplot of estimated V_p and 20 meter iso-depth uphole velocities. The exhibited linear relation confirms the predictions. The plotted V_p is obtained by multiplying V_s by 2.3, for the reasons given above. This fits the data well where the slope of the best fitted line is approximately 1.